NOVEMBER/DECEMBER 2024

FEL51/CEL51/ BEL51 — MICROPROCESSOR AND ITS APPLICATIONS

Time : Three hours Maximum : 75 marks

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SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. What is microprocessor?
2. What is an Opcode?
3. Write the need for timing diagram.
4. Define code conversion.
5. What is an Instruction cycle?
6. Write the memory interfacing.
7. What is the size of ports in 8255?
8. Expand SIM.
9. List the major components of the keyboard/display interface.
10. What is the use of stepper motor?

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) Explain various flags of 8085 with diagram of flag structure.

Or

(b) Write the assembly language program for 8 bit subtraction.

12. (a) Discuss about the PUSH instruction with example.

Or

(b) Write the algorithm for BCD to binary conversion

13. (a) Draw the machine cycle and explain it.

Or

(b) Explain the memory mapped I/O techniques.

14. (a) List out the software interrupts and explain it.

Or

(b) Explain the polled I/O.

15. (a) Discuss about the internal architecture of 8279.

Or

(b) Explain how a Temperature controller can be interfaced to 8085.

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SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. With suitable examples explain the 8085 instruction set in detail.

17. Discuss about the subroutine instructions with program.

18. Draw and explain timing diagram for I/O read and I/O write cycle of 8085.

19. Explain in detail about the SIM and RIM instruction.

20. Draw interfacing diagram of ADC with 8085 and its explanation.

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